

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of claims in the application.

Claims 1-8 (Canceled)

9. (Presently Amended) A base station apparatus comprising:

a downlink transmitter that transmits a first signal with a directivity directed to a mobile station apparatus and a second signal with directivity wider than that of the first signal;

a receiver that receives a reception power ratio of the first signal to the second signal measured in the mobile station apparatus;

a determiner that determines whether the directivity of the first signal should be changed based on a difference between a transmission power ratio of the first signal to the second signal and the reception power ratio, the determiner further sets a first threshold and a second threshold that is greater than a first threshold; and

a directivity controller that changes the directivity of the first signal based on a result of a determination by the determiner, The base station apparatus according to claim 1, wherein the determiner sets a third threshold greater than a first threshold, and

wherein, when if the difference between the reception power ratio and the transmission power ratio is greater than the first third threshold, the determiner determines that the a directivity shift of the first signal should be changed; is large [[,]]
and

wherein, when if the difference between the reception power ratio and the transmission power ratio is greater than the second ~~first~~ threshold, the determiner determines that a directivity shift of the first signal is large, and when the difference between the reception power ratio and the transmission power ratio is less ~~smaller~~ than the second ~~third~~ threshold, the determiner determines that the directivity shift of the first signal is small.

10. (Presently Amended) The base station apparatus according to claim 9, wherein when if the determiner determines that the directivity shift of the first signal is large, the directivity controller broadens the width of directivity to adjust the directivity, and when if the determiner determines that the directivity shift of the first signal is small, the directivity controller does not change the width of directivity but changes the directivity orientation.

11. (Presently Amended) The base station apparatus according to claim 9, wherein, when if the determiner determines that the directivity shift of the first signal is large, the directivity controller broadens the width of directivity, adjusts the directivity and then returns the width of the directivity to the original value, and when if the determiner determines that the directivity shift of the first signal is small, the directivity controller does not change the width of directivity but changes the directivity orientation.

Claims 12-20 (canceled)